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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/512,415	10/25/2004	Karsten Emrich	016906-0348	6668
22428	7590	03/02/2006	EXAMINER	
FOLEY AND LARDNER LLP SUITE 500 3000 K STREET NW WASHINGTON, DC 20007			WALBERG, TERESA J	
			ART UNIT	PAPER NUMBER
			3753	

DATE MAILED: 03/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

SP

Office Action Summary	Application No. 10/512,415	Applicant(s) EMRICH ET AL.	
	Examiner Teresa J. Walberg	Art Unit 3753	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 October 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>10/25/04</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-5, 9, and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Jacobus (2,209,974).

Jacobus discloses (see Fig. 6) a heat exchanger including at least one box (16) with at least one chamber for distributing a flowing medium, and with at least one tube bundle (28) consisting of tubes which are connected in a communicating manner to the at least one chamber (16), the chamber (16) having a tube plate (16) with orifices into which the tubes are insertable, at least one tube (28) having an at least double walled construction (48) in a region which is in the inserted state in an orifice of the tube plate (16), an inner wall of the at least one tube bearing against an outer wall of the tube, the inner wall being soldered or welded (at 42) to the outer wall, a wall of the tube being designed as a shaped sheet metal strip (36), an inner or outer wall of the tube being designed as an extruded molding (40), an inner wall having a depression (30 in Fig. 2) on its outside, the depression being elongate and a depth or width decreasing in a longitudinal direction (see Fig. 2).

3. Claims 1, 2, 7, and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Dillon et al (2,143,477).

Dillon et al disclose (see Fig. 1) a heat exchanger including at least one box (10) with at least one chamber for distributing a flowing medium, and with at least one tube bundle consisting of tubes (12) which are connected in a communicating manner to the at least one chamber (10), the chamber (10) having a tube plate (Fig. 1) with orifices into which the tubes (12) are insertable, at least one tube (12) having an at least double walled construction (Fig. 1) in a region which is in the inserted state in an orifice of the tube plate (10), an inner wall (20) of the at least one tube bearing against an outer wall (12) of the tube, at least one tube has at least one connecting web (30) which connects mutually opposite regions of an inner wall, and the connecting web is constructed in one piece with the inner wall.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dillon et al (2,143,477) in view of Kado (5,101,887).

Dillon et al disclose the claimed structure with the exception of the tube being flat or polygonal. Kado teaches using flat tubes in a heat exchanger. It would have been obvious in view of Kado to use flat tubes in the heat exchanger of Dillon et al for improved tube strength.

6. Claims 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dillon et al (2,143,477) in view of Serck Radiators (GB 622,421).

Dillon et al discloses the claimed structure with the exception of the outer wall of one tube being connected to an outer wall of an adjacent tube via at least one connecting element and a connecting element being a shaped metal strip. Serck Radiators teaches an outer wall of one tube being connected to an outer wall of an adjacent tube via at least one connecting element and a connecting element being a shaped metal strip in a heat exchanger. It would have been obvious in view of Serck Radiators to use shaped metal connecting elements in the heat exchanger of Dillon et al for improved strength of the heat exchanger.


7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Bay, Schultz, Yount, Maretzo, and Rexford et al are cited to show multi-layer tube ends.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Teresa J. Walberg whose telephone number is 571-272-4790. The examiner can normally be reached on M-F 9:00 - 5:30.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eric Keasel can be reached on 571-272-4929. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Teresa J. Walberg
Primary Examiner
Art Unit 3753
